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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,311	02/15/2001	Ajay Chandra V. Gummalla	1875.0450001	3159
26111	7590	09/15/2004	EXAMINER	
STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			HSU, ALPUS	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,311

Applicant(s)

GUMMALLA ET AL.

Examiner

Alpus H. Hsu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2, 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 34 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Claim 34 is rejected as non-enabling since the claim recites only a single means (i.e. headend) and thus encompasses all possible means for performing a desired function. See Ex parte Bullock, 1907 C.D. 93; 127 O.G. 1580.

3. Claims 6, 9-16, 22, 25-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of claims 6, 15, 22, and 31, the recitation of "said order is priority first come first served" is not understood what it means. Is it referring to the order or the priority to be first come first served?

In claim 9, lines 9-10, claim 25, line 13, it is improper to use the parentheses in the claim since it is unclear as to whether the recitation within the parentheses is intended to be the claim limitation or not.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 9, 11-16, 25, 27-32 are rejected under 35 U.S.C. 102(e) as being anticipated by KHAUNTE in US 6,546,017 B1.

Regarding claim 9, KHAUNTE discloses a method for combining requests for bandwidth by a data provider for data transmission over an asynchronous communication medium, by receiving bandwidth requests from one or more data providers, each bandwidth request having a data provider identifier, a priority identifier, and the amount of required bandwidth (col. 12, lines 24-27, col. 13, lines 32-35, 44-52), combining, by data provider identifier and priority identifier, the amount of bandwidth required to represent a data burst bandwidth (col. 4, lines 38-46), based on one or more quality of service parameters, scheduling each data burst bandwidth in an order to be serviced (col. 14, lines 6-12), and granting the data burst bandwidth to the data provider over the asynchronous communication medium (col. 12, lines 27-29).

Regarding claim 11, KHAUNTE discloses the asynchronous communication medium is cable TV (col. 12, lines 22-24).

Regarding claims 12 and 13, KHAUNTE discloses the asynchronous communication medium is wireless or satellite (col. 11, lines 64-67).

Regarding claim 14, KHAUNTE discloses the asynchronous communication medium is the Internet (col. 9, lines 20-22).

Regarding claim 15, KHAUNTE discloses the order of scheduling to be first come first served (col. 14, lines 10-12).

Regarding claim 16, KHAUNTE discloses each data burst may contain bandwidth requests with different priority identifiers (col. 13, lines 59-63).

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Regarding claim 25, KHAUNTE discloses a system for combining requests for bandwidth by a data provider for data transmission over an asynchronous communication medium, comprising a headend (102), and a scheduler (104) for receiving bandwidth requests from one or more data providers, each bandwidth request having a data provider identifier, a priority identifier, and the amount of required bandwidth (col. 12, lines 24-27, col. 13, lines 32-35, 44-52), combining, by data provider identifier and priority identifier, the amount of bandwidth required to represent a data burst bandwidth (col. 4, lines 38-46), based on one or more quality of service parameters, scheduling each data burst bandwidth in an order to be serviced (col. 14, lines 6-12), and granting the data burst bandwidth to the data provider over the asynchronous communication medium (col. 12, lines 27-29).

Regarding claim 27, KHAUNTE discloses the asynchronous communication medium is cable TV (col. 12, lines 22-24).

Regarding claims 28 and 29, KHAUNTE discloses the asynchronous communication medium is wireless or satellite (col. 11, lines 64-67).

Regarding claim 30, KHAUNTE discloses the asynchronous communication medium is the Internet (col. 9, lines 20-22).

Regarding claim 31, KHAUNTE discloses the order of scheduling to be first come first served (col. 14, lines 10-12).

Regarding claim 32, KHAUNTE discloses each data burst may contain bandwidth requests with different priority identifiers (col. 13, lines 59-63).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over KHAUNTE in US 6,546,017 B1 in view of DAVIS in EP 0 573 739 A2.

Regarding claims 10 and 26, KHAUNTE differs from the claims, in that, it fails to disclose the specific feature of having quality of service parameters include efficiency of transmission and transfer delay tolerance, which is well known in the art and commonly applied in communications field for data flow control purpose. DAVIS, for example, from the similar field of endeavor, teaches the use of quality of service parameters include efficiency of transmission and transfer delay tolerance (abstract, col. 3, lines 2-7), which can be easily adopted by one of ordinary skill in the art into the system of KHAUNTE to provide system with data quality assurance.

9. Claims 1-8, 17-24, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over KHAUNTE in US 6,546,017 B1 in view of TODD et al. in US 6,359,901 B1.

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Regarding claims 1 and 33, KHAUNTE discloses a method for combining requests for bandwidth by a data provider for data transmission over an asynchronous communication medium, by receiving bandwidth requests from one or more data providers, each bandwidth request having a data provider identifier, a priority identifier, and the amount of required bandwidth (col. 12, lines 24-27, col. 13, lines 32-35, 44-52), storing each bandwidth requests in a data structure so as to maintain the order the bandwidth requests were received (col. 13, lines 63-66), based on the priority identifier and the order of each bandwidth request, scheduling each data burst bandwidth in an order to be serviced (col. 14, lines 6-12), and granting the data burst bandwidth to the data provider over the asynchronous communication medium (col. 12, lines 27-29).

KHAUNTE differs from the claims, in that, it fails to disclose the step of combining each bandwidth requests having the same data provider identifier into a data burst bandwidth, which is well known in the art and commonly used in communications field for bandwidth conservation. TODD et al., for example, from the similar field of endeavor, teaches the scheme of combining bandwidth requests having the same data provider identifier into a data burst bandwidth (col. 4, line 58 to col. 5, line 11, col. 5, lines 38-55), which can be easily adopted by one of ordinary skill in the art into the system of KHAUNTE to maximize the system bandwidth allocation to further improve the system efficiency.

Regarding claim 2, KHAUNTE discloses the asynchronous communication medium is cable TV (col. 12, lines 22-24).

Regarding claims 3 and 4, KHAUNTE discloses the asynchronous communication medium is wireless or satellite (col. 11, lines 64-67).

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Regarding claim 5, KHAUNTE discloses the asynchronous communication medium is the Internet (col. 9, lines 20-22).

Regarding claim 6, KHAUNTE discloses the order of scheduling to be first come first served (col. 14, lines 10-12).

Regarding claim 7, KHAUNTE discloses each data burst may contain bandwidth requests with different priority identifiers (col. 13, lines 59-63).

Regarding claim 8, KHAUNTE discloses the data structure is comprised of one or more queues (col. 13, lines 63-66).

Regarding claims 17 and 34, KHAUNTE discloses a system for combining requests for bandwidth by a data provider for data transmission over an asynchronous communication medium, comprising a headend (102), and a scheduler (104) for receiving bandwidth requests from one or more data providers, each bandwidth request having a data provider identifier, a priority identifier, and the amount of required bandwidth (col. 12, lines 24-27, col. 13, lines 32-35, 44-52), storing each bandwidth requests in a data structure so as to maintain the order the bandwidth requests were received (col. 13, lines 63-66), based on the priority identifier and the order of each bandwidth request, scheduling each data burst bandwidth in an order to be serviced (col. 14, lines 6-12), and granting the data burst bandwidth to the data provider over the asynchronous communication medium (col. 12, lines 27-29).

KHAUNTE differs from the claims, in that, it fails to disclose the function performed by the scheduler for combining each bandwidth requests having the same data provider identifier into a data burst bandwidth, which is well known in the art and commonly used in communications field for bandwidth conservation. TODD et al., for example, from the similar

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field of endeavor, teaches the scheme of combining bandwidth requests having the same data provider identifier into a data burst bandwidth (col. 4, line 58 to col. 5, line 11, col. 5, lines 38-55), which can be easily adopted by one of ordinary skill in the art into the system of KHAUNTE to maximize the system bandwidth allocation to further improve the system efficiency.

Regarding claim 18, KHAUNTE discloses the asynchronous communication medium is cable TV (col. 12, lines 22-24).

Regarding claims 19 and 20, KHAUNTE discloses the asynchronous communication medium is wireless or satellite (col. 11, lines 64-67).

Regarding claim 21, KHAUNTE discloses the asynchronous communication medium is the Internet (col. 9, lines 20-22).

Regarding claim 22, KHAUNTE discloses the order of scheduling to be first come first served (col. 14, lines 10-12).

Regarding claim 23, KHAUNTE discloses each data burst may contain bandwidth requests with different priority identifiers (col. 13, lines 59-63).

Regarding claim 24, KHAUNTE discloses the data structure is comprised of one or more queues (col. 13, lines 63-66).

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

DeMoney, Moss, Chapman et al. and Borland et al. are cited to show the feature of bandwidth allocation for data transmission utilizing scheduling algorithm similar to the claimed invention.

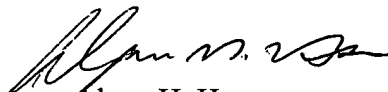
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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alpus H. Hsu whose telephone number is (571)272-3146. The examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AHH



Alpus H. Hsu
Primary Examiner
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